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EDUCATIONAL STANDARDS¹

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There are two parties in this matter of standards. Some of us are afraid that the demand for standards will lead to formalism in the schools. Some of us are very sure that schools cannot be definite in their aims and efficient in their operations until there is a clear understanding of the standards of education.

Much of our partisan fervor in this matter is due to differences in definitions. If I say that I am here to advocate the adoption of exact educational standards, it is safe to assume that a considerable number of you will without further ado read me out of your party. You will do this, not because of any sins of mine, but because you hold to a certain definition of the word "standard." You think of that proud achievement of modern manufacturing mechanics which makes it possible to turn out year after year parts which are alike to the hundredth of an inch. You will rise to a high pitch of eloquence in asserting that such a mechanical standardization and reduction of children and teachers to uniformity is absolutely intolerable. May I venture to anticipate you in your outburst? I, too, would join in the cry against making children all of the same length, breadth, and thickness; I would that teachers were not so much alike as they are; I wish that we knew how to fan into a flame the spark of individual initiative that every child brings to school.

If our agreement in this matter saves us from immediate hostilities, I ask you to listen for a moment while I try to bring out by an example or two what I think ought to be the accepted definition of the words "educational standard."

An educational standard of the type which I advocate is a mode of development which nature has shown to be advantageous. Let

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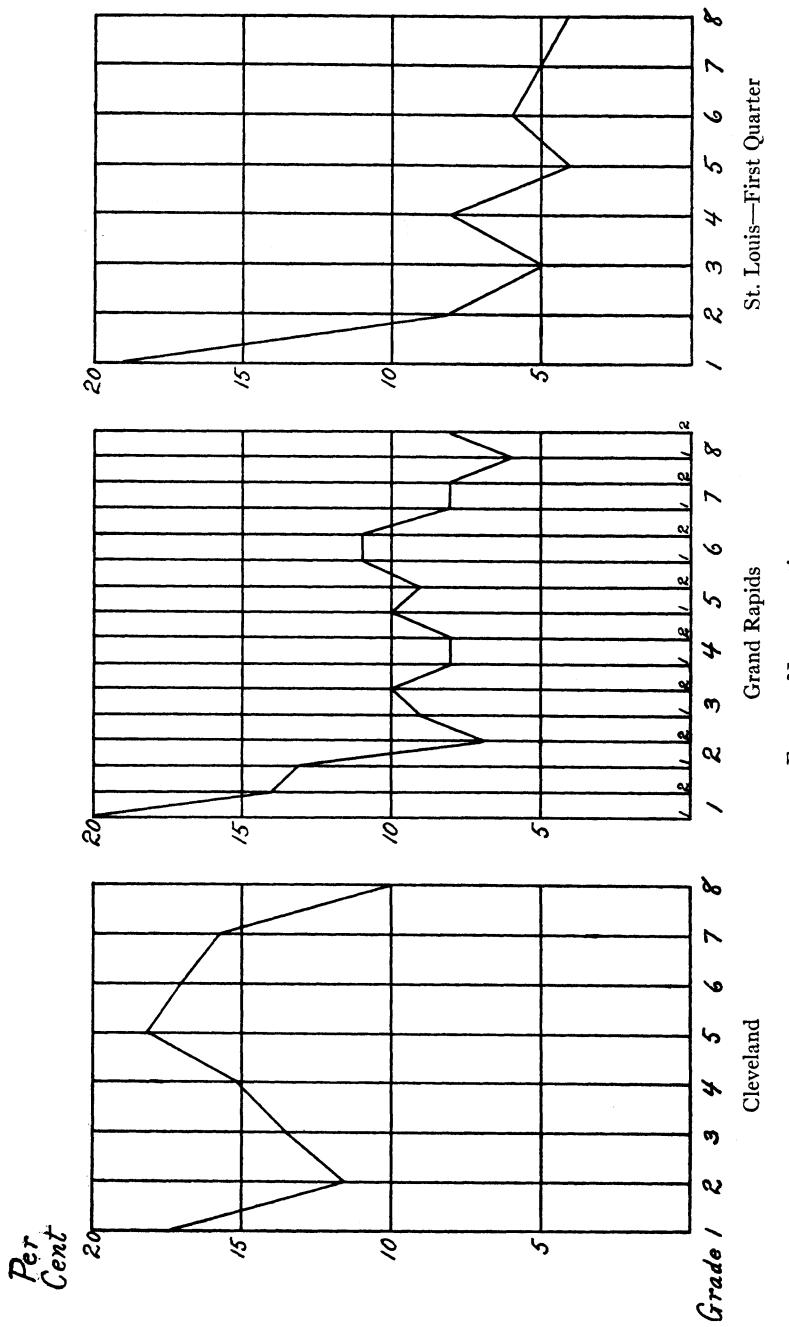


FIG. 1.—Non-promotions

us borrow an analogy from biology. In the struggle for life, so our friends, the students of birds, tell us, sparrows have been standardized. After a storm, if you gather up the sparrows that have perished, you will find in your collection of unfortunates a preponderance of oversized and undersized sparrows. Middle-sized sparrows live longer than those which are too big or too little. The sparrow that is too big is clumsy and disadvantaged; the sparrow which is too small is not able to resist the elements. If you belonged in the sparrow world and were a trained biologist, you would have excellent reason for being interested in measurements of your own size, and on the basis of this knowledge you would decide whether to go out in storms or to stay at home.

Take another example, nearer to ourselves. If the protoplasm which makes up the human body is to be kept in the best possible condition for the performance of its vital functions, much physical effort will have to be devoted to keeping up a certain temperature. The temperature cannot go too high or too low without unhappy results. The range of possible variations is astonishingly small. Yet one never hears of protests in the name of individual initiative against ninety-eight and two-tenths degrees. Not only so, but the physician has found it extraordinarily convenient for all sorts of reasons to find out every time he is called in just what are the personal deviations from the physiological temperature standard, and he always bases prescriptions on what he finds to be the facts.

What is true of sparrows and bodily temperature is true of all kinds of social relations. You and I have a standard method of passing each other on the street. One can go back in imagination to the beginnings of paths, when each man disputed with the stranger about the right of way. Individual pride and self-assertion doubtless appeared again and again. But in due time it dawned on men that it is better to put aside disputes and to follow a social convention.

Again, we have learned in the long course of social life that it is better to have a standard set of sounds with which to express our ideas. It is easily thinkable that each should make his own preferred noise when he sees a given object; but one example of Babel apparently has served to set the mind of man at rest about

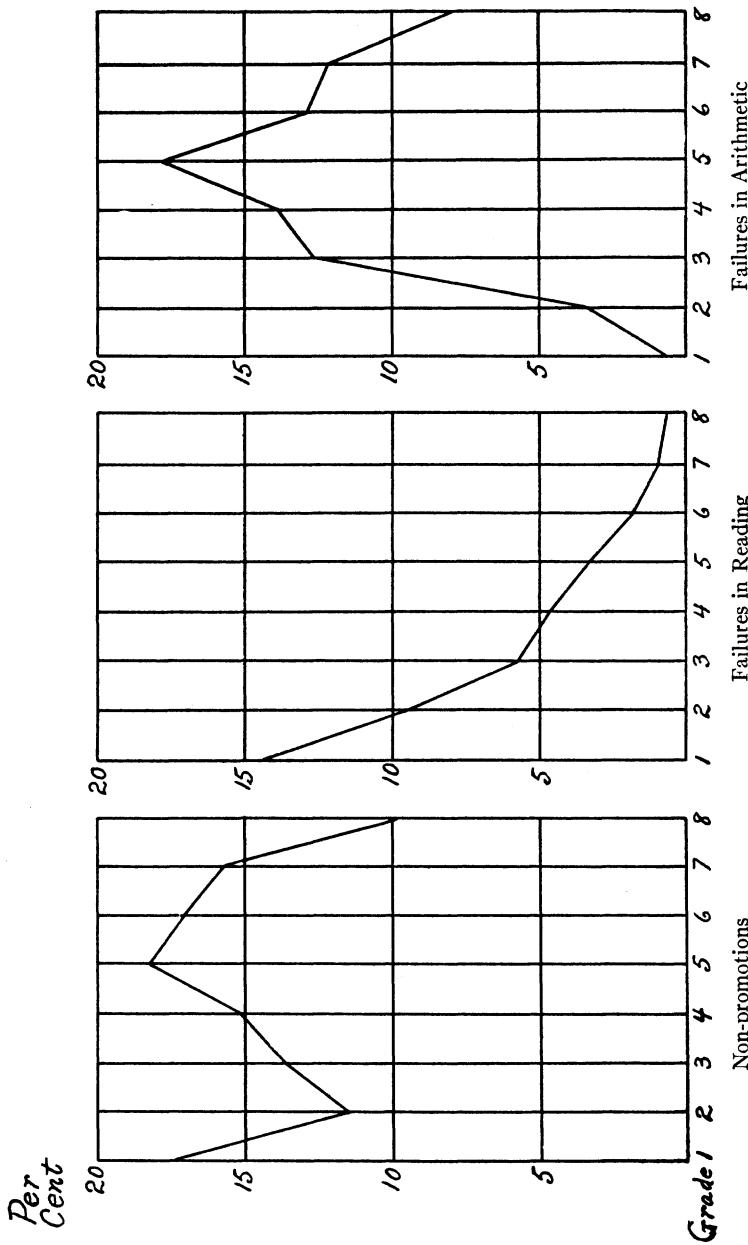


FIG. 2.—Cleveland 1914

the desirability of conforming to social standards in the matter of vocal sounds.

The fact is, whether we like it or not, in physiological life and in social life we conform to a thousand standards. We may, if we will, cry out against a discovery of these standards; how much better it will be if we all adopt the attitude of modern science and interest ourselves, first, in that which is, and, secondly, in that which can be developed through the control of natural conditions.

The study of standards thus becomes at once a scientific and a practical task. We must know nature's limitations on behavior, many of which we cannot change. Here we must conform as best we can. We shall do this the more completely because of our knowledge. For example, we cannot change the body temperature, but we can become keen in detecting the conditions which are inimical to bodily life. In other cases we can improve standards. This is especially true in the case of social conventions. Once we become full aware of the fact that passing our neighbors on the street involves the rights of two parties, we shall refine the methods of giving to each his due. Once we realize that the purpose of speech is to bring two minds into harmony, we shall perfect our mastery of language conventions.

So it is with educational practice. School life is governed no less than other phases of social life by standards which nature has imposed. You cannot make a child of six years of age pay attention to any single thing for ten minutes. You cannot interest a nine-year-old child in James's chapter on the "Stream of Consciousness." You cannot teach a child how to write fluently in one month. You cannot get third-grade children to form a football team; they are not capable of social co-operation of the type demanded for team play. We might spend the rest of today and all of tomorrow enumerating limitations which nature has set upon the activities of children, and in this enumeration we should be dealing with the negative side of certain important natural educational standards.

More difficult, but infinitely more important, is the task of defining nature's endowments on the positive side. If third-grade children cannot compass certain intellectual tasks, what

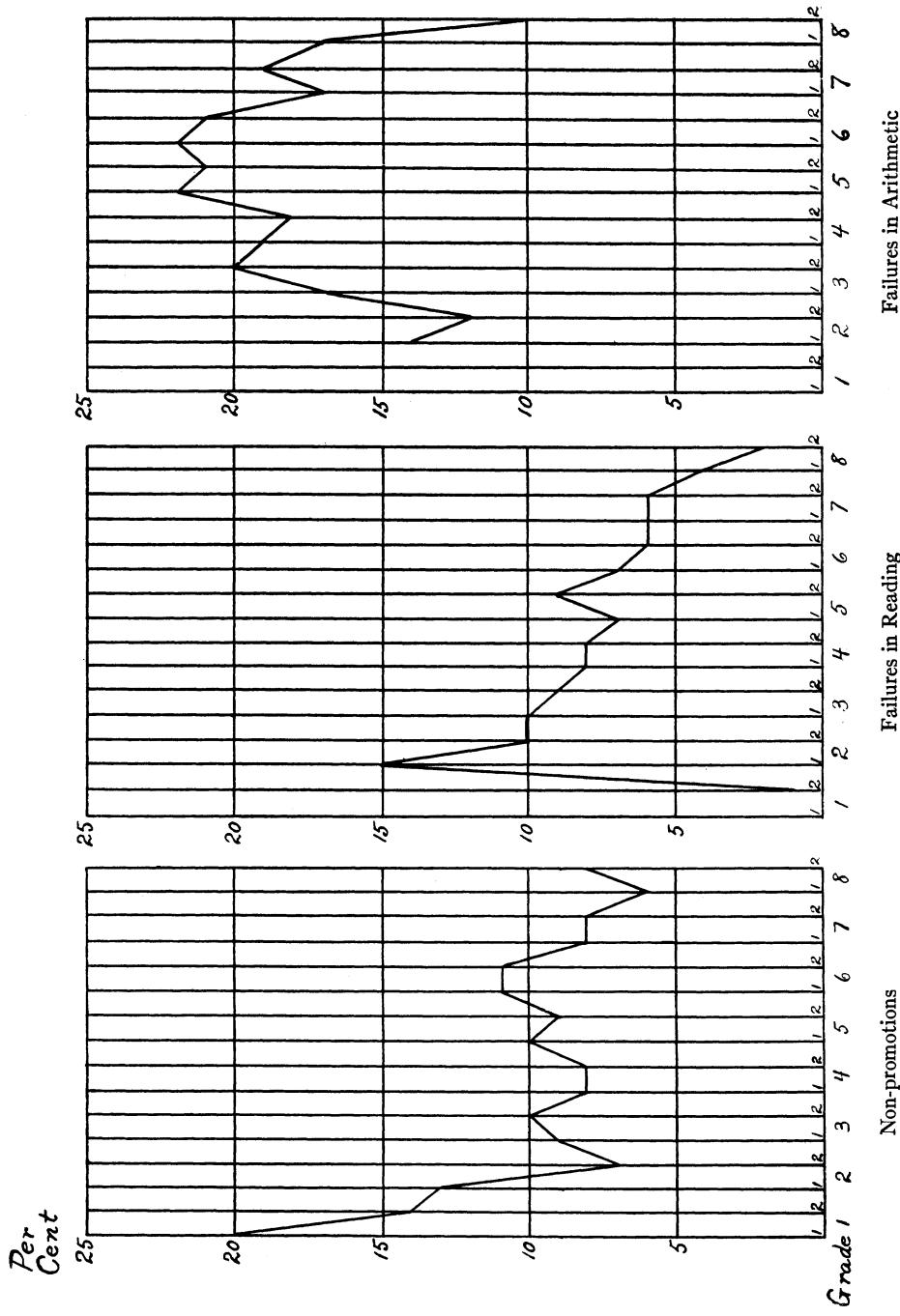


FIG. 3.—Grand Rapids 1914

do they understand? What kinds of games do they play? What can they read? How well do they write?

The wise teacher is always watching pupils in order that the standard of teaching shall conform to the natural standard. My plea is for this conformity to natural standards throughout the school system. Without hesitation or doubt it may be asserted that we have often departed from natural standards, and that we ought to admonish one another diligently to seek out the truth in these matters in order that we may correct our wayward steps.

Then, too, there are involved in school work, social relations in which the rights of many parties are involved. Shall we allow these relations to be governed by individual caprice, or shall we ask that they be systematized? Shall each of us set up his own method of walking in the educational highway, or shall we demand that the rules of the road be made definite and intelligible to all?

I am sure that there can be only one answer to these questions. I venture, therefore, to close the introduction of this topic and will spend the second half of my time exhibiting some figures which illustrate what I mean by a study of practice as it is today, and by the demand that in some respects this practice be reformed in the light of study.

Fig. 1 is a summary of the records of non-promotion in the school systems of Cleveland, Ohio, Grand Rapids, Michigan, and St. Louis, Missouri. In each of the diagrams the different grades of the system are represented by vertical lines. The horizontal levels are levels representing the percentage of non-promotion. Thus the diagram at the extreme left of the figure shows that in the first grade non-promotions in the Cleveland schools amount to about 17 per cent of the pupils. Non-promotions in the second grade of the Cleveland system drop to about 12 per cent. From this point on, that is, through the third, fourth, and fifth grades, non-promotions steadily increase.

The Cleveland diagram is to be contrasted with the two diagrams for Grand Rapids and St. Louis. It is seen that the level of non-promotion in the latter cities is very much lower than in Cleveland, and that there is a regular decline through the grades which makes it clear that the pupils who get through the early

years are regarded by the school system as increasingly competent in mastering the work of the later grades. These diagrams show clearly that three different school systems have very different practices in the matter of non-promotion. There can hardly be any question that the more advantageous systems are represented by the diagrams for Grand Rapids and St. Louis.

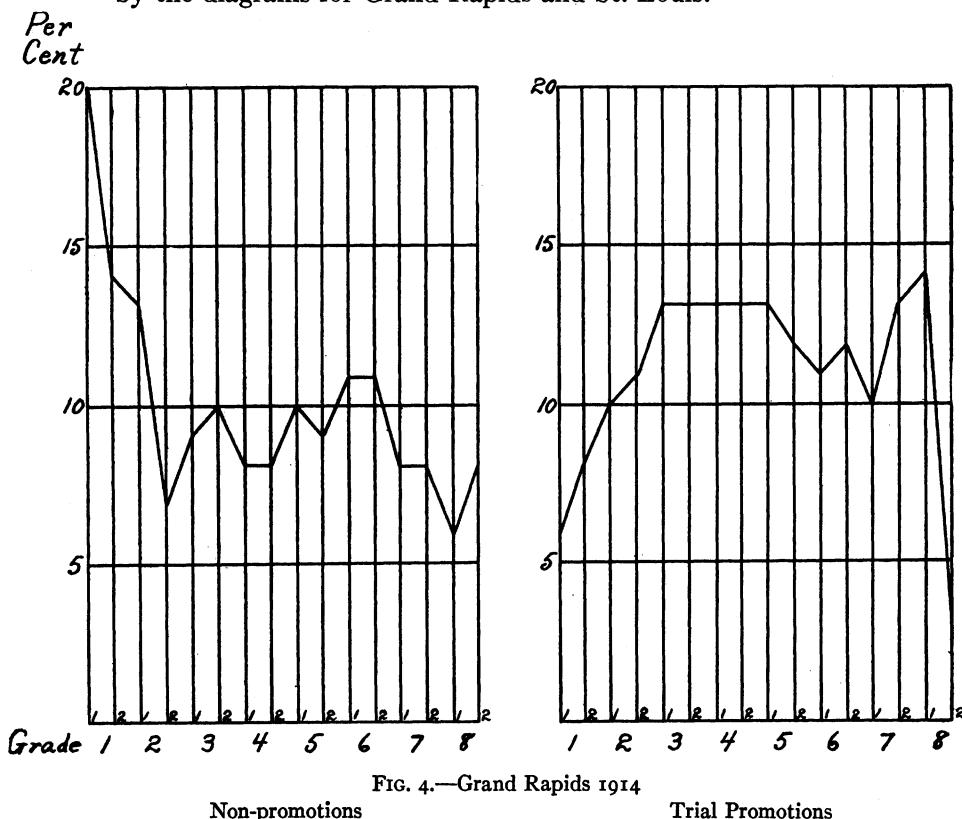


FIG. 4.—Grand Rapids 1914

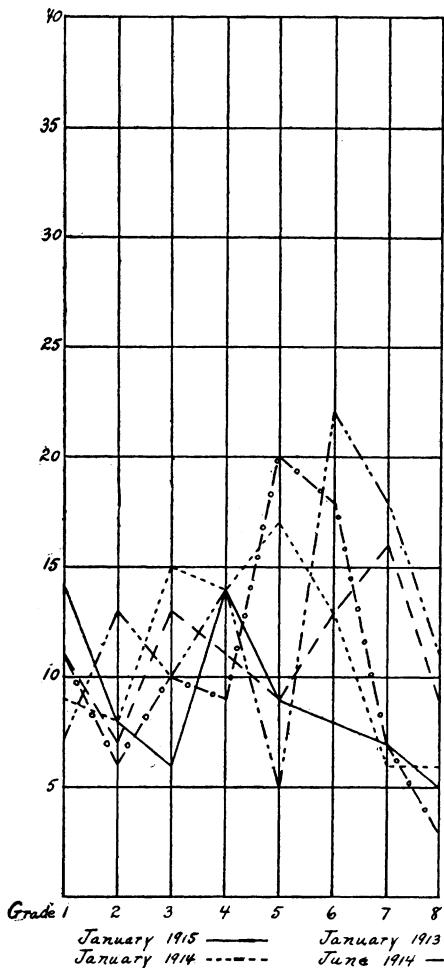
Non-promotions

Trial Promotions

Fig. 2 takes up in some detail the Cleveland situation. The diagram at the left repeats the general diagram of non-promotions exhibited in the first figure. The middle diagram shows the failures in reading. These, it will be noted, are high in the first grade and continuously decrease in the subsequent grades. The diagram at the right of the figure shows that arithmetic is the source of many of the characteristics of the non-promotion curve. The

difficulties in arithmetic increase rapidly from the second grade to the fifth. The level of failure in this subject would seem to indi-

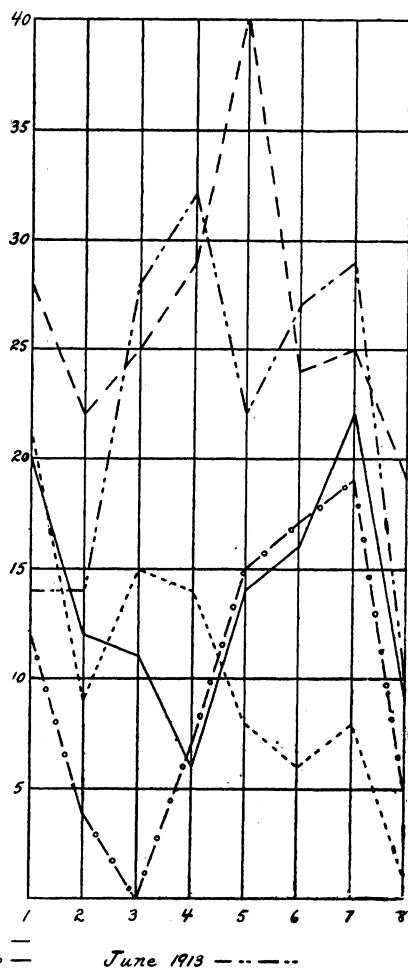
Per
Cent



School A

January 1913 — — —

June 1914 - - - - -



School B

FIG. 5.—Cleveland
Non-promotions by Buildings

cate that the subject as taught in the Cleveland schools needs to be reorganized. Especially is the contrast between reading and arithmetic impressive in this case.

Fig. 3 gives the record of Grand Rapids, which is comparable to the record of Cleveland in Fig. 2. The diagram at the left repeats the non-promotion curve. The middle diagram shows the failures in reading. Here again it will be noted that from the second grade on there is a decline in the number of failures in reading. The first line in this diagram is somewhat misleading. Very few of the first grades in the Grand Rapids system reported failures in reading. The rise in the first line therefore means not so much an absolute increase in the number of failures as a more complete reporting of failures in the second grade. When it comes to arithmetic, practically all of the comments which were made with regard to the Cleveland diagram on arithmetic can be repeated except the statement that this arithmetic curve is like the curve of non-promotion. We have, therefore, in comparing the records of Cleveland and Grand Rapids a very impressive series of cases. In reading and arithmetic Grand Rapids and Cleveland are very much alike; in non-promotion they differ from each other very radically. How can this be true? The answer to this question is found in Fig. 4. Once more the non-promotion curve for Grand Rapids is repeated at the left of this figure. On the right is given a diagram which shows the level of trial promotions in the Grand Rapids schools, that is, 10 per cent of the pupils in the second grade of the Grand Rapids schools are promoted, but not with full standing. In the first division of the third grade 13 per cent of the children are promoted on trial.

Trial promotion in Grand Rapids recognizes the possibility of a child's continuing to do the work of a grade even if he has failed in arithmetic. The failures in arithmetic are less influential in Grand Rapids in determining the curve of non-promotion, just because Grand Rapids has this administrative device of trial promotion. The importance of an administrative device can be definitely brought out by contrasting the non-promotion curves of Cleveland and Grand Rapids. The essential difference between these two systems appears to lie in the device of trial promotion and in the further administrative procedure which attaches to this important device.

Thus far the figures have dealt with entire school systems. The same type of inquiry can be made with regard to individual build-

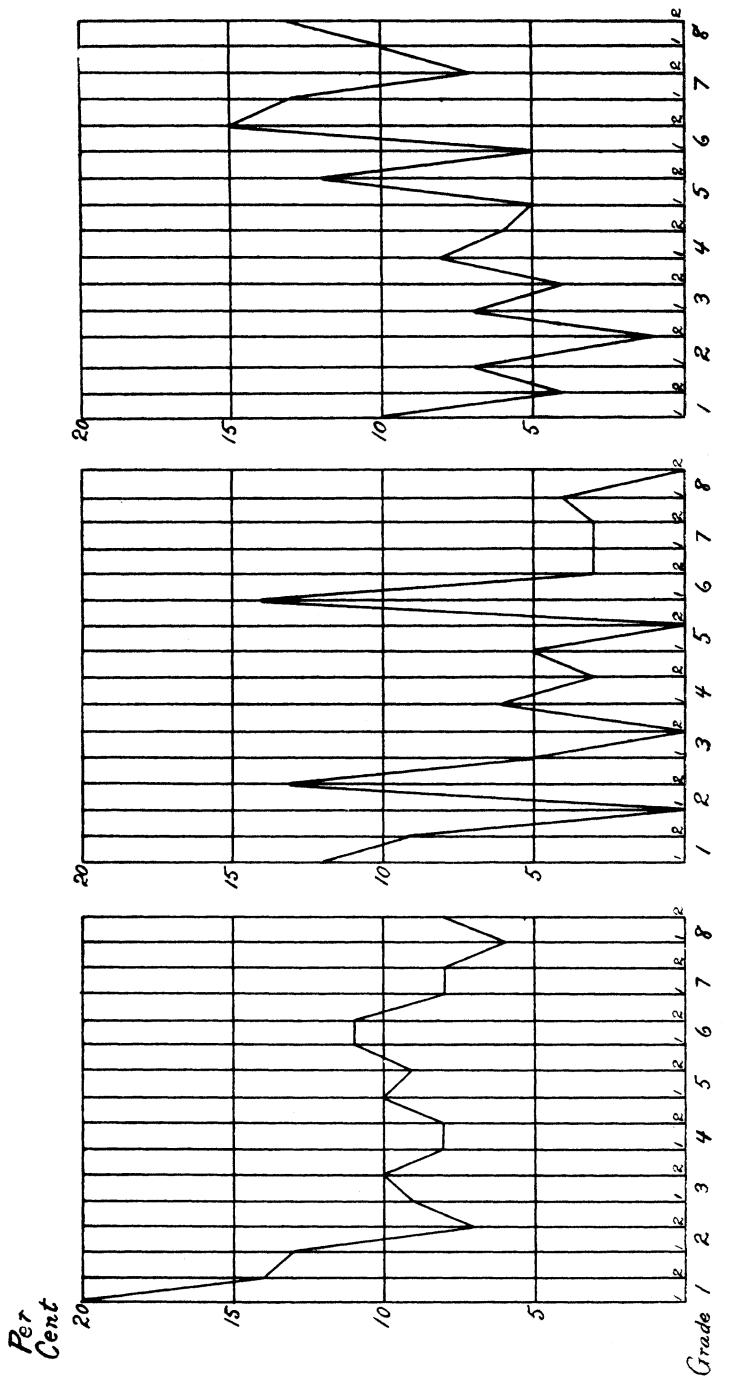


FIG. 6.—Grand Rapids
Non-promotions

ings. Fig. 5 shows the records of non-promotion for five periods for two of the school buildings in the Cleveland system. The diagram on the left shows a school which varies from its own practices very slightly. All of the lines running across this diagram maintain approximately the same level. The diagram on the

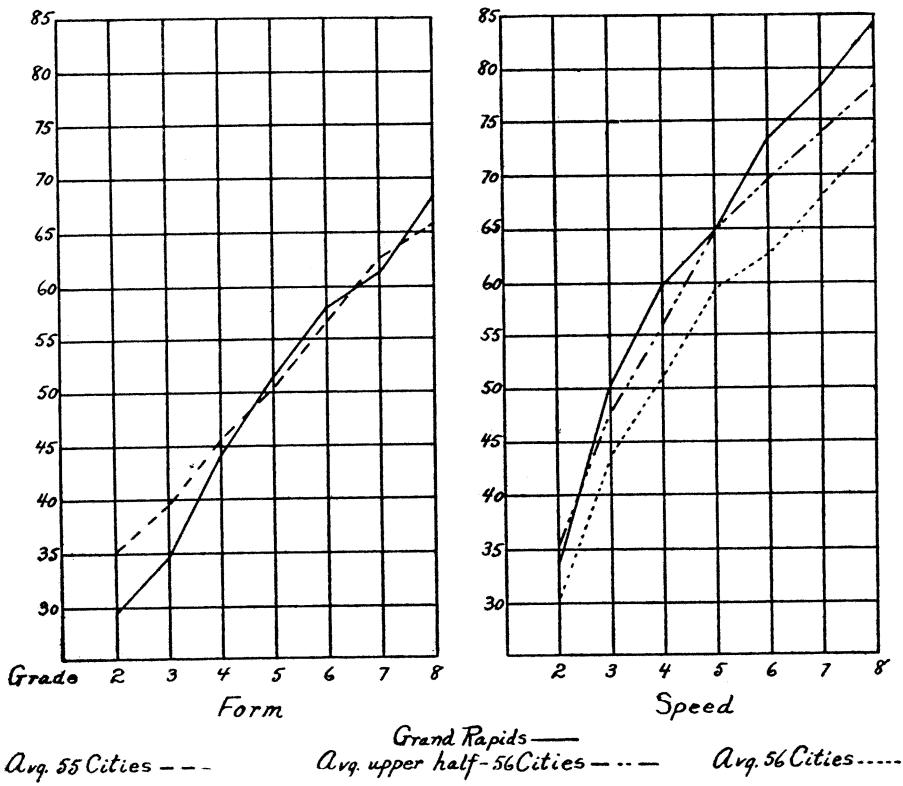


FIG. 7—Grand Rapids

Handwriting

right, on the other hand, shows the widest fluctuations. It needs only a casual examination of these two diagrams to make it clear that two buildings within the same system may be very different in their policies with regard to non-promotion.

Fig. 6 shows in a similar way wide fluctuations between two schools in the Grand Rapids system. Here again the individual

grades, as well as the building as a whole, should be contrasted with each other and with the general curve for non-promotion throughout the system.

Another way of attacking the matter in detail is to tabulate the results in particular subjects. There are methods of treating particular subjects in a school system which are consciously adopted

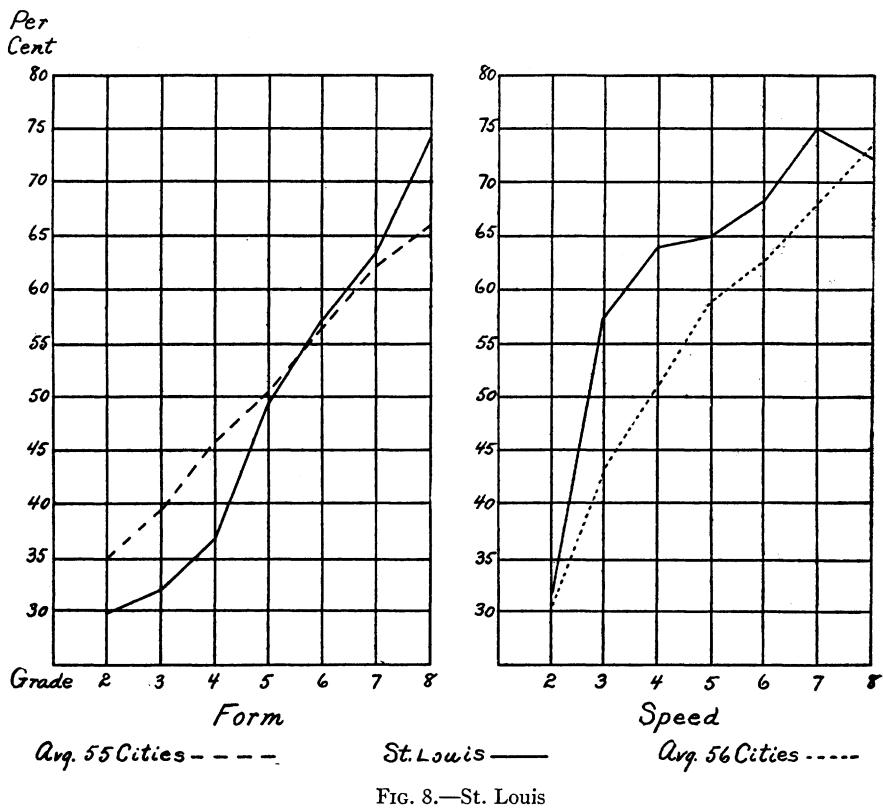


FIG. 8.—St. Louis

Handwriting

and there are methods of treating particular subjects which are not clearly understood even by the officers of the system itself. Grand Rapids and St. Louis illustrate the first type of conscious supervision within a single subject in their treatment of handwriting. Fig. 7 shows the relation of handwriting in Grand Rapids to a general average set up by compiling the results of 55 cities. On the

left-hand side of this diagram the comparison is made for the quality of handwriting or the form of the specimens collected from the system. The broken line in this left-hand diagram shows the level of quality in 55 cities. Thus for the second grade the quality on the Ayres scale is 35, for the third grade it is nearly 40, for the fourth grade it is about 45, and so on. The full-drawn line represents the

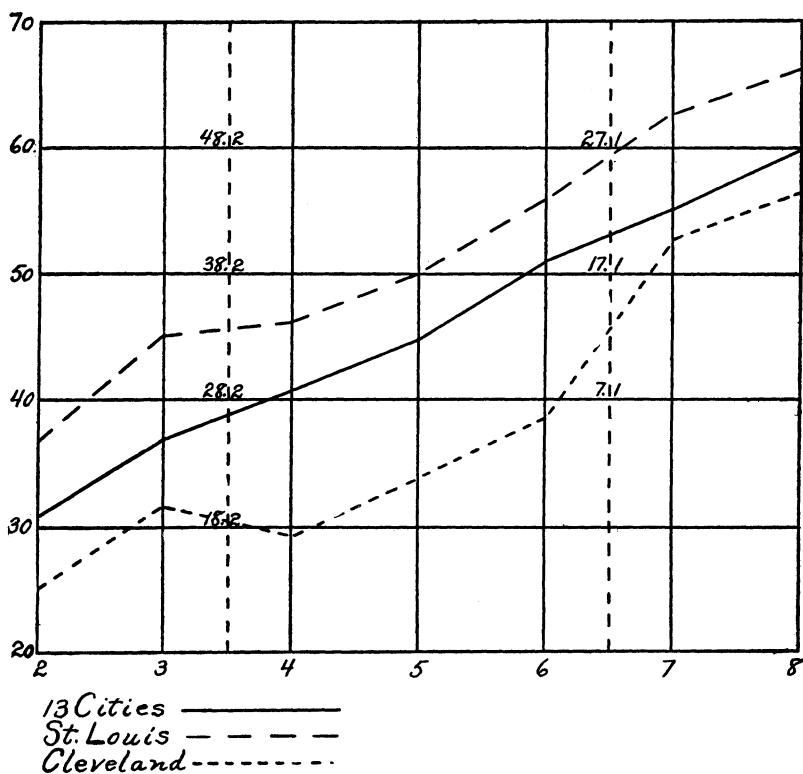


FIG. 9.—Quality. Silent Reading

corresponding record for Grand Rapids. It is here seen that Grand Rapids deliberately gives up the effort to secure the highest possible quality in the lower grades. The reason for this is clearly presented in the diagram at the right of the figure. Speed, it will be seen, reaches a very high level in the Grand Rapids system. Some years ago the Grand Rapids system, being critical of the penmanship that was exhibited in the schools, adopted the rapid-

flowing arm movement, and the officers of the system are clearly aware of the fact that they are aiming at freedom and fluency of movement rather than slow, deliberate cultivation of form.

Fig. 8 needs no detailed comment. It shows for St. Louis much the same situation as that exhibited in Grand Rapids except in a somewhat more striking degree. Here again the effort has been directed toward freedom and fluency of movement rather than perfection in great detail of the form of the writing.

Fig. 9 shows comparative results in studies of reading. The three lines in this diagram represent Cleveland, a group of cities which may be regarded as setting an average, and St. Louis, which is represented by the uppermost line. The diagram represents the ability of children to hold and reproduce ideas which they have read. Evidently any city which stands at the level represented by the diagram for Cleveland cannot be supposed to have adopted consciously the policy of holding back the children in their interpretation of reading-matter. The deficiency in this respect must be due to lack of proper supervision or methods of instruction. Conversely, the success of St. Louis in this matter is conspicuous, and is shown to be consistent throughout all the grades. As contrasted with the results for penmanship, we are dealing here, undoubtedly, with a general policy of instruction and with a result which can only be described as adopted, at least where the success is low, without clear consciousness on the part of the school officers.